A PUBLIC POLICY RESEARCH PROPOSAL FOR MINNESOTA POST-SECONDARY EDUCATION IN THE NEXT TWENTY YEARS

By
Tom Mortenson*

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*The author is a policy analyst for the Management Information Division of the Office of Management Planning and Information Services, University of Minnesota. This paper represents only the views of the author and not necessarily the views of the Management Information Division or the University of Minnesota.

A. INTRODUCTION

Statewide planning for post-secondary education in Minnesota must now consider types of planning issues for which there exist neither precedents nor experience. The century of quantitative growth that climaxed in 1968 saw the creation of one of the nation's premier universities, the development of state normal schools into large regional colleges with many post-baccalaureate programs, the establishment of junior colleges in local school districts which have grown into the state community college system, the recent explosive growth of area vocational-technical institutes, and the maintenance of major private colleges including the greatest concentration of Lutheran colleges in the United States.

Since 1968 the growth has stopped. Enrollments have stabilized. The determinants of enrollments make a prediction of total enrollment decline over the next twenty years an absolute certainty. In some areas of Minnesota - notably southwestern Minnesota - the population-induced enrollment decline set in 1970 and 1971. In northeastern Minnesota enrollments are at their peak now and will very soon begin the inevitable decline. In a few areas of the state where the population is younger, the population-induced enrollment decline will be delayed until about 1980. Then there too enrollments will decline.

What then does this mean for public policy in Minnesota? How should we prepare for this future? How can we allocate and reallocate public resources to achieve some set of agreed-upon objectives for both public and private post-secondary education in Minnesota? What should we plan for and by what sets of principles should the decisions be made by which public and institutional policy is effected here?

This paper attempts to outline and introduce what the author feels to be the central policy research issues in statewide planning for public and private post-secondary education in Minnesota. The definition of the problem is his own and may or may not represent the views of others who participate in the formation of public and institutional policy towards post-secondary education in Minnesota.

B. SITUATION

Post-secondary institutional enrollments are the product of three factors. First is the size and location of market populations for the programs offered by institutions. Second is the percentage of these market populations that choose to matriculate in programs offered by the institutions. Third is the percentage of those who matriculate who continue to enroll from term to term and year to year through completion of their program of studies. In the past enrollments in institutions have grown because the cumulative effect of these three determinants has been positive. Enrollments have recently stabilized because at least two and, in some areas of Minnesota, all three determinants have stablized or reversed previous growth trends. In the future traditional enrollments will decline because the traditional market population for institutional services will decline, even though entrance and retention rates may improve somewhat over the present situation.

All educational institutions serve well defined market populations. These market populations are defined in terms of location, age, aptitude, resources, and other variables. On a statewide basis the traditional market population for post-secondary enrollment is the annual high school graduate pool. The numbers in the pool and their distribution over the state may be projected with reasonable certainty over the next 18 years. Vital statistics on births, and public and private primary and secondary enrollment data, permit the

identification of the number and location of high school graduates in Minnesota from now through 1990.

On a statewide basis high school graduates projected by this method show the total number increasing from 68,220 in 1973, to a peak of about 74,700 in 1979 (20 years after the peak number of live births of 88,000 in 1959), then dropping sharply to 53,800 by 1985 and to about 44,300 by 1991. The effects of this increase and decrease will not be felt uniformly across Minnesota. Although on a statewide basis the peak number of high school graduates will not be reached until 1979, already the peak has passed in large non-growth regions of the state. For example, in the natural service areas of Worthington Community College, Southwest State College, and University of Minnesota-Morris - all in southwestern Minnesota - the peak number of high school graduates occurred in 1969. In the natural service areas of Mankato State College, and Willmar and Fergus Falls Community Colleges, the peak occurred in 1970. In the areas served by Austin, Northland, Itasca, and Rainy River Community Colleges, and by the University of Minnesota at Duluth the peak occurred in either 1971 or 1972. To the extent these institutions remain dependent on local high school graduates from which to recruit enrollments, they have already entered their population-induced enrollment decline which will continue probably without interruption for the next two decades. By comparison the peak number of high school graduates in the natural service areas for Rochester and Brainerd Community Colleges, St. Cloud and Bemidji State Colleges, and the University campus and six community colleges in the Metropolitan Area will not occur until sometime between 1979 and 1981.

Alternative market populations for institutional programs and services exist. In the past, however, only tiny fractions of these potential

students have enrolled in institutions. Furthermore, public policy up to the present has avoided significant resource commitment to adult and continuing education programs in Minnesota - as if to say no clear public purpose is served by providing public subsidies to such programs.

The second and third determinants of institutional enrollments - entrance rates and retention rates - appear to be closely related to the same causal determinants. Therefore they are discussed together here.

Potential post-secondary students enter institutions both because they want to and because they are able to. They continue their enrollment from term to term and from year to year for the same reasons. Their motivation is determined by a wide variety of influences including their parents' educational background, the success or failure of their own educational experiences, the perceived payoff from several year's investment in education relative to lost earnings, etc. Their ability to undertake post-secondary study is determined by family resources, part-time employment opportunities, the availability of loans and scholarhips, scholastic aptitude, mental and physical health, and other factors.

In recent years both entrance rates and retention rates - the results of many individual decisions influenced by the above factors - have behaved similarly. The percentage of high school graduates going on to college in Minnesota, for example, grew from 31% in 1951 to a peak of 55% in 1968, then dropped to 48% by 1972. The behavior of boys and girls has been quite different during the same period. In 1956 the percent of boys graduating from high schools in Minnesota who went on to college was 50%. This figure grew slowly to 59% in 1968, and has since dropped sharply to 48% in 1972, the lowest college entrance rate for boys since 1957. For girls, however, the percent graduating from Minnesota high schools going on to college increased from

C. PROBLEM

The enrollment decline generates a set of public and institutional policy problems either never before addressed at all in Minnesota or addressed inadequately. In summary the public policy problem is this: As enrollment declines, either educational quality will decline or (at the same time that) per student costs of education will go up. The decline in educational quality will take the forms of reduced depth and diversity of programs offerd at existing institutions as well as faculty teaching assignments outside of areas of expertise. The increase in per student costs of education will be the direct result of paring of junior (less expensive) faculty and the retention of senior (more expensive) faculty, constant operating costs such as administration spread among fewer students, and other similar expenditure patterns resulting from enrollment decline.

This problem has been severely compounded in Minnesota by the overbuilding of public colleges throughout the state on the false belief that distance is a significant barrier to access to college in Minnesota. Persuasive evidence exists that distance is a barrier to access for only a very small portion of the high school graduate population. Further, the provision of access by building campuses has had the effect of denying access to many more students than have been benefitted by such campuses. For example, at Marshall where a state college was established in 1967, the cost per student who was able to attend college only because a public college was built there has been approximately $46,000 per student. Had the money invested in the land, buildings, and equipment at Marshall been invested through the state scholarship and grant-in-aid programs, the cost per student would have been something less than $2000 per student - or alternatively something more

32% in 1956 to 51% in 1968, 1969, and 1970, and has since dropped to 48% - now about the same as the rate for boys.

Retention data on a statewide basis are not available, but University data probably reflect statewide trends in other collegiate institutions. The percent of freshmen classes admitted to the University since 1956 still enrolled in the fall term of their senior year increased from 35-36% of those admitted in 1956-58, to 50% of those admitted in 1968. Retention of classes admitted since 1968, however, appears to have dropped somewhat in the freshman, sophomore, and junior years.

Empirical analysis of the determinants of student decisions to enter and continue enrollment in post-secondary institutions shows that in aggregate terms these decisions are influenced primarily by scholastic aptitude, current economic conditions, and the current job market in the field of training. Two of these three factors are now working against student retention decisions: scholastic aptitude of Minnesota high school students has been dropping since 1968, and the job market for college trained manpower in many traditional fields has been oversupplied recently. Although about half of all Minnesota high school graduates now enter college, only about 20% of all jobs require college-level training. If two-thirds of those who enter college ultimately graduate, all those who drop out and one-third of those who ultimately graduate will not find careers in fields requiring college-level training.

The outlook is for declining traditional enrollments in all Minnesota collegiate institutions during the next two decades. In some institutions, the enrollment decline has already set in. In others, by virtue of their location, the enrollment decline is still eight to ten years off. For all, however, the decline is certain.

than 21 times as many students would have been able to attend college as were enabled by building Southwest State College.[1]

The magnitude of the overbuilding of campuses problem may also be illustrated by comparing the enrollment size of currently existing institutions with minimum institutional sizes recently recommended by the Carnegie Commission on Higher Education. The Carnegie group recommended in 1971 that community colleges should enroll at least 2500 students, yet in 1972 only one of Minnesota's eighteen public community colleges met that criterion. The Carnegie group also recommended that four-year liberal arts colleges should enroll at least 1100 students. The one public liberal arts college-

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[1] According to information supplied by Southwest State College, $43,000,000 in land, buildings, and equipment have been invested at Marshall since Southwest opened in 1967. Had these funds instead been invested in bonds yielding, for example, 7 1/2%, some $3,225,000 per year would have been available. This is the opportunity cost and may be said to represent the foregone opportunity of having alternatively invested these funds in state scholarships and grants-in-aid targeted exclusively for the most needy students. Because some 60 to 80 students per year have entered college at Southwest only because the college was built there - roughly 10% of each entering freshman class since 1967 - the average annual cost per benefitted student has been about $46,000. Because state assistance to needy students is limited to $1000 per student per year, and the student entering college may be expected to remain enrolled an average of 2.2 years, the maximum alternative allocation to achieve the same increment in access through state scholarships and grants-in-aid would have been $154,000 per year. This is less than 5% of the opportunity cost of the capital investment in Southwest's campus. A comparably absurb example exists in the Metropolitan area. Since 1965 some $34,000,000 has been invested the construction of six community colleges in the Twin Cities area. However, the rate at which Metropolitan area high school graduates have gone on to college since 1965 has decreased relative to the statewide college entrance rate over the same time period. What has occurred both in Southwestern Minnesota and the Metropolitan area is not increased access, but rather the replacement of educational costs previously borne by families of students from these areas with funds supplied by the taxpayers of the state. At best this is a questionable use of public funds; at worst it has denied access to college for a substantial number of needy and deserving potential students elsewhere.

University of Minnesota at Morris - met that criteria, but ten of 23 private four-year colleges in Minnesota did not. If one includes Minnesota's area vocational-technical institutes in the community college category, none of the 33 existing AVTSs meet the minimum enrollment size criteria of the Carnegie Commission.[2]

Public policy towards post-secondary education in Minnesota is clearly in need of extensive overhaul, and the need to begin to do so immediately is made more urgent by declining enrollments. However, if such changes in existing public policy are to be made wisely, major policy research must be initiated at once. More information is needed on which to make judgements, new policy, and resultant resource reallocation decisions.

D. POLICY RESEARCH

Certain basic policy research on existing operations is essential to clarify the particular problems and potentials of post-secondary education in this state. Parts of this research are underway already. Much more should be initiated promptly. All of it must be tied together to provide information leading to coherent and logical answers to the policy options faced by public and institutional policy makers. The following studies are suggested to provide basic information on benefits and costs of alternatives that would be considered in reformulating state policy toward tertiary education.

1. Critical program mass: For different types of institutions, what levels of program breadth and diversity have been achieved at different levels of enrollment? What is gained and lost by changes in enrollment?

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2 See Carnegie Commission on Higher Education, New Students and New Places, 1971, pp. 6-9, 65-95; and Minnesota Higher Education Coordinating Commission, Responding to Change, 1973, pp. 14-15.

2. Faculty qualififcations: How do faculty teaching responsibilities vary by enrollment size relative to faculty educational qualifications for such assignments? At small institutional enrollment size do faculty teach courses for which they have inadequate training?

3. Access: What are the determinants of student access to post-secondary education? To what extent is distance a barrier to access? How many and who would be adversely affected by closing particular institutions? How might access be provided alternatively to these people? Who is denied access now but could benefit from post-secondary education?

4. Operating costs: To what extent are operating costs related to enrollment size? To what extent are they related to other factors? How might operating costs be expected to change when enrollments decline? What would be the change in marginal costs at alternative institutions if particular campuses close?

5. Physical plant: What is the relationship between full-time-equivalent enrollment and student stations of different types at particular campuses? How intensively are student stations utilized? What alternatives uses exist for campuses that might be closed?

6. Delivery systems: By what alternative means may post-secondary educational services be provided? Media and itinerant faculty should be considered. Also utilization of high schools may provide wider spatial accessibility for immobile populations such as employed adults.

7. Economic impact: What is the economic impact of a public post-secondary institution on a community? To what extent is the community dependent on the institution for economic health? What would be the effect of the removal of the institution on the economic health of a

community?

8. Other states: Do other states with boundaries contiguous to that of Minnesota have similar problems. What are they doing about such problems that would affect Minnesota? What might Minnesota do jointly with other states in dealing with such problems?

9) CULTURAL IMPACT
10) FLEXIBILITY OF RESOURCE REALLOCATION

Quite likely other similar studies would be identified which would provide information useful to those who will reformulate public and institutional policy in Minnesota. Such studies should be initiated as they are identified.

As these separate studies are completed, they must be integrated. Alternatives for public and institutional policy should first be identified. Then costs and benefits associated with each alternative must be identified so that policy makers may understand the benefits and consequences of the options available for consideration.

E. ALTERNATIVES

The results of the policy research suggested here would provide, when integrated, a set of alternative policy courses for the state and institutions to follow. Costs and benefits of each alternative would be known. However, the results of this policy research and integration would not specify what policies should be adopted and implemented through resource reallocation by the state, educational systems, and colleges. Choices among identified alternatives should only be made by those who are most directly accountable to the citizens of Minnesota.

The choice or choices among the alternatives should be made against a set of criteria which reflect the goals, functions, and purposes for which post-secondary education was created and continues to serve Minnesotans. Among the almost innumerable goals, functions, and purposes which have been

identified in the past are some which are not relevant today.[3] For those which we could identify today not all might be meaningful a decade hence. At any point in time two or more goals are likely to compete for limited resources, and one or the other or both would have to be compromised.

The political process by which post-secondary institutions have been created and supported in Minnesota in the past has lead to many unwise and unsound educational decisions. Many institutions have been built when and where none should have. But that same political process may (or may not) have underlying economic redistributional effects with broader social justification. Clearly the effects of establishing or closing institutions are more than educational, and such effects should receive some subordinate attention and open recognition in policy studies and public debate on the educational issues suggested here.

This paper has assumed from its beginning that long-range planning and resource allocation decisions for post-secondary education in Minnesota should be based primarily on educational considerations. Existing, preliminary data from each of the policy research areas suggested earlier suggests that public and institutional policy in Minnesota is in need of extensive

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[3] One example of a goal of the past no longer relevant to management of tertiary education in Minnesota is the goal of providing a public collegiate campus within 35 miles of nearly every citizen of Minnesota. This goal appears frequently in plans of the last two decades. It is based on the more or less explicit assumption that distance is a major barrier to access. In point of fact distance is truly a barrier to access only for high school graduates from families earning less than $13,000 per year - roughly 43% of all high school graduates. For this group, <u>any</u> distance imposes some barrier to access. For those in this group who want to attend college, would profit from the experience, but are unable to do so, direct student assistance rather than subsidies through institutional support appear to provide the greatest opportunity for access.

overhaul. The post-secondary enrollment decline - already underway in large areas of Minnesota - make preparation for this policy reformulation urgent. Current, reliable, complete research results should be the basis for the new policies. Such research should be initiated immediately and completed as soon as possible.